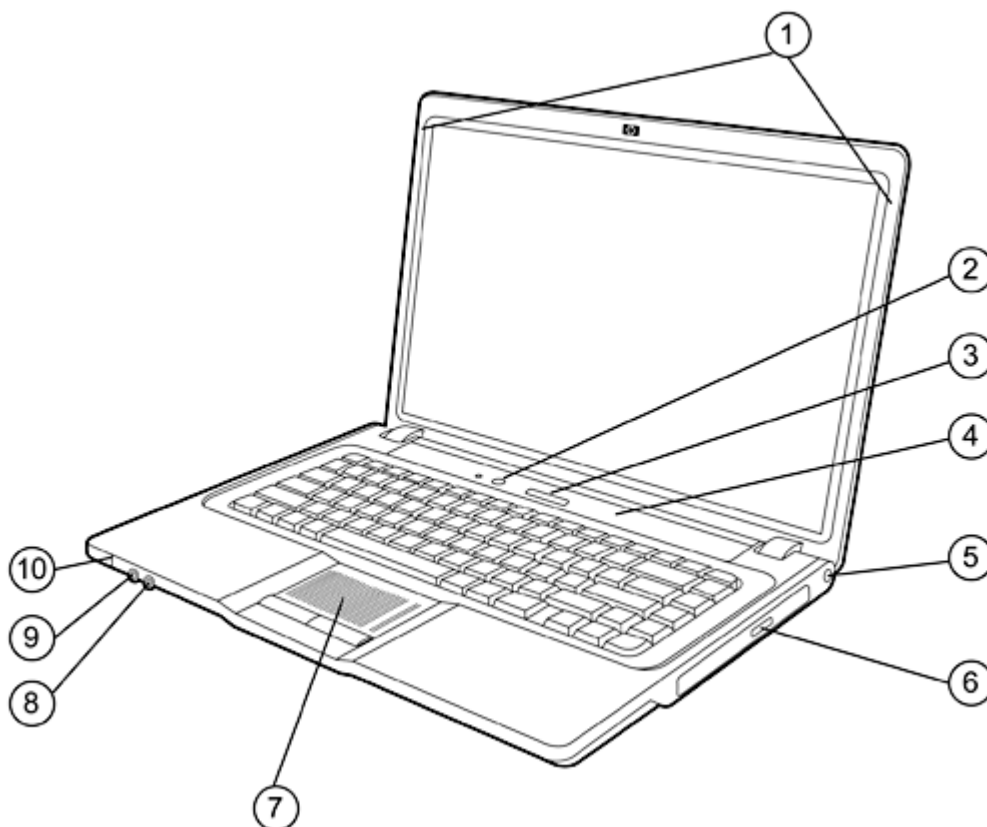


## Overview

HP recommends  
Windows Vista® Business

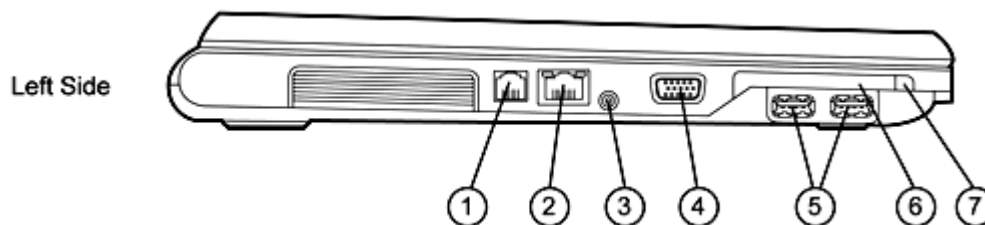


- 1. Dual-band Wireless LAN Antennas\*
- 2. Wireless On/Off Button with LED\*
- 3. Power Button with LED
- 4. Speaker
- 5. Kensington Lock Slot

- 6. Optical Drive
- 7. Touchpad with Scroll Zone
- 8. Microphone Jack
- 9. Headphone Jack
- 10. Battery LED

\* Select models only

## Overview



- |                                   |                         |
|-----------------------------------|-------------------------|
| 1. RJ-11 Port (Modem)             | 5. 2 USB 2.0 Ports      |
| 2. RJ-45 Port (NIC)               | 6. PC Card Slot         |
| 3. DC Power Connector             | 7. PC Card Eject Button |
| 4. VGA/External Monitor Connector |                         |

## At A Glance

- Genuine Windows Vista Business 32, Genuine Windows Vista Home Basic 32
- Genuine Windows XP Professional supported  
SuSe Linux Enterprise Desktop 10 certified
- Intel® Core™ 2 Duo processor or Intel Celeron® processor
- 15.4-inch WXGA BrightView Display
- Sleek industrial design starting at 6 lb/2.7 kg and 1.26 inch/31.9 mm thin at front
- Mobile Intel 945GME Express Chipset or Mobile Intel 940GME Express Chipset
- Supports up to 2 GB of DDR2 SDRAM
- 120/160-GB 5400 rpm SATA hard drive
- Intel Graphics Media Accelerator 950, up to 224-MB shared system memory
- Integrated 802.11 a/b/g or b/g wireless LAN module\*
- Intel Centrino® Duo processor technology\*
- Intel 82562GT 10/100 Network Connection
- Touchpad with scroll zone

\* Select models only

### Select Models

**HP 530**  
KH528AT#ABA  
Smart Buy

<b>Processor</b>	Intel Celeron Processor 530 (1.73-GHz, 533-MHz FSB, 1-MB L2 cache) <sup>1</sup>
<b>Operating System</b>	Genuine Windows Vista Home Basic 32
<b>Chipset</b>	Mobile Intel 940GME Express Chipset
<b>System Memory</b>	1024-MB 533/667-MHz DDR2 SDRAM in one slot Two SODIMM slots; supported memory 2048 MB <sup>2</sup> Operates at a maximum of 533-MHz with 667-MHz memory
<b>Hard Drive</b>	120-GB <sup>3</sup> 5400 rpm SMART SATA
<b>Removable Media</b>	DVD+/-RW SuperMulti DL Drive
<b>Display</b>	15.4-inch WXGA BrightView (1280 x 800 resolution) VGA port supports resolutions up to 2048 x 1536 at 75 Hz, and lower resolutions at up to 100 Hz <sup>4</sup>
<b>Graphics</b>	Intel Graphics Media Accelerator 950, up to 224-MB shared system memory
<b>Audio</b>	Conexant CX20549 Integrated speaker Stereo headphone/line out Microphone in
<b>Communications</b>	Intel 82562GT 10/100 Network Connection Conexant CX20548-11 56K modem <sup>5</sup>
<b>Integrated Wireless</b>	Broadcom WMIB184G 802.11b/g
<b>Pointing Device</b>	Touchpad with scroll zone, two soft-touch pick buttons
<b>Battery</b>	4-cell (32 WHr) Lithium-Ion
<b>Power</b>	External 65W adapter
<b>Warranty</b>	1/1/0

**HP 530**  
FH553AT#ABA  
Smart Buy

<b>Processor</b>	Intel Core 2 Duo Processor T5200 (1.6-GHz, 533-MHz FSB, 2-MB L2 cache) <sup>1</sup>
<b>Intel Centrino Duo processor technology</b>	Enabled
<b>Operating System</b>	Genuine Windows Vista <sup>6</sup> Business 32
<b>Chipset</b>	Mobile Intel 945GME Express Chipset
<b>System Memory</b>	1024-MB 533/667-MHz DDR2 SDRAM in one slot Two SODIMM slots; supported memory 2048 MB <sup>2</sup> Operates at a maximum of 533-MHz with 667-MHz memory
<b>Hard Drive</b>	160-GB <sup>3</sup> 5400 rpm SMART SATA
<b>Removable Media</b>	DVD+/-RW SuperMulti DL Drive
<b>Display</b>	15.4-inch WXGA BrightView (1280 x 800 resolution) VGA port supports resolutions up to 2048 x 1536 at 75 Hz, and lower resolutions at up to 100 Hz <sup>4</sup>
<b>Graphics</b>	Intel Graphics Media Accelerator 950, up to 224-MB shared system memory
<b>Audio</b>	Conexant CX20549 Integrated speaker Stereo headphone/line out Microphone in

### Select Models

Communications	Intel 82562GT 10/100 Network Connection Conexant CX20548-11 56K modem <sup>5</sup>
Integrated Wireless	Intel PRO/Wireless 3945ABG Network Connection 802.11a/b/g
Pointing Device	Touchpad with scroll zone, two soft-touch pick buttons
Battery	4-cell (32 WHr) Lithium-Ion
Power	External 65W adapter
Warranty	1/1/0

**HP 530**  
FH554AT#ABA  
Smart Buy

Processor	Intel Core 2 Duo Processor T5200 (1.6-GHz, 553-MHz FSB, 2-MB L2 cache) <sup>1</sup>
Intel Centrino Duo processor technology	Enabled
Operating System	Genuine Windows Vista Business 32
Chipset	Mobile Intel 945GME Express Chipset
System Memory	2048-MB 533/667-MHz DDR2 SDRAM in two slots Two SODIMM slots; supported memory 2048 MB <sup>2</sup> Operates at a maximum of 533-MHz with 667-MHz memory
Hard Drive	160-GB <sup>3</sup> 5400 rpm SMART SATA
Removable Media	DVD+/-RW SuperMulti DL Drive
Display	15.4-inch WXGA BrightView (1280 x 800 resolution) VGA port supports resolutions up to 2048 x 1536 at 75 Hz, and lower resolutions at up to 100 Hz <sup>4</sup>
Graphics	Intel Graphics Media Accelerator 950, up to 224-MB shared system memory
Audio	Conexant CX20549 Integrated speaker Stereo headphone/line out Microphone in
Communications	Intel 82562GT 10/100 Network Connection Conexant CX20548-11 56K modem <sup>5</sup>
Integrated Wireless	Intel PRO/Wireless 3945ABG Network Connection 802.11a/b/g
Pointing Device	Touchpad with scroll zone, two soft-touch pick buttons
Battery	4-cell (32 WHr) Lithium-Ion
Power	External 65W adapter
Warranty	1/1/0

### Select Models

**HP 530**  
FH526AA#ABA  
Regional

<b>Processor</b>	Intel Celeron Processor 530 (1.73-GHz, 533-MHz FSB, 1-MB L2 cache) <sup>1</sup>
<b>Operating System</b>	Genuine Windows Vista Home Basic 32
<b>Chipset</b>	Mobile Intel 940GME Express Chipset
<b>System Memory</b>	1024-MB 533/667-MHz DDR2 SDRAM in one slot Two SODIMM slots; supported memory 2048 MB <sup>2</sup> Operates at a maximum of 533-MHz with 667-MHz memory
<b>Hard Drive</b>	120-GB <sup>3</sup> 5400 rpm SMART SATA
<b>Removable Media</b>	DVD+/-RW SuperMulti DL Drive
<b>Display</b>	15.4-inch WXGA BrightView (1280 x 800 resolution) VGA port supports resolutions up to 2048 x 1536 at 75 Hz, and lower resolutions at up to 100 Hz <sup>4</sup>
<b>Graphics</b>	Intel Graphics Media Accelerator 950, up to 224-MB shared system memory
<b>Audio</b>	Conexant CX20549 Integrated speaker Stereo headphone/line out Microphone in
<b>Communications</b>	Intel 82562GT 10/100 Network Connection Conexant CX20548-11 56K modem <sup>5</sup>
<b>Integrated Wireless</b>	Broadcom WMIB184G 802.11b/g
<b>Pointing Device</b>	Touchpad with scroll zone, two soft-touch pick buttons
<b>Battery</b>	4-cell (32 WHr) Lithium-Ion
<b>Power</b>	External 65W adapter
<b>Warranty</b>	1/1/0

**HP 530**  
FH522AA#ABA  
Regional

<b>Processor</b>	Intel Core 2 Duo Processor T5200 (1.6-GHz, 553-MHz FSB, 2-MB L2 cache) <sup>1</sup>
<b>Intel Centrino Duo processor technology</b>	Enabled
<b>Operating System</b>	Genuine Windows Vista Business 32
<b>Chipset</b>	Mobile Intel 945GME Express Chipset
<b>System Memory</b>	1024-MB 533/667-MHz DDR2 SDRAM in one slot Two SODIMM slots; supported memory 2048 MB <sup>2</sup> Operates at a maximum of 533-MHz with 667-MHz memory
<b>Hard Drive</b>	120-GB <sup>3</sup> 5400 rpm SMART SATA
<b>Removable Media</b>	DVD+/-RW SuperMulti DL Drive
<b>Display</b>	15.4-inch WXGA BrightView (1280 x 800 resolution) VGA port supports resolutions up to 2048 x 1536 at 75 Hz, and lower resolutions at up to 100 Hz <sup>4</sup>
<b>Graphics</b>	Intel Graphics Media Accelerator 950, up to 224-MB shared system memory
<b>Audio</b>	Conexant CX20549 Integrated speaker Stereo headphone/line out Microphone in
<b>Communications</b>	Intel 82562GT 10/100 Network Connection Conexant CX20548-11 56K modem <sup>5</sup>

### Select Models

<b>Integrated Wireless</b>	Intel PRO/Wireless 3945ABG Network Connection 802.11a/b/g
<b>Pointing Device</b>	Touchpad with scroll zone, two soft-touch pick buttons
<b>Battery</b>	4-cell (32 WHr) Lithium-Ion
<b>Power</b>	External 65W adapter
<b>Warranty</b>	1/1/0

1. Intel's numbering system is not a measurement of higher performance. Processor speed denotes maximum performance mode; processors will run at lower speeds in battery optimization mode.
2. Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility.
3. GB = 1 billion bytes. Actual available capacity is less. Up to 10-GB of memory is reserved for system recovery software.
4. Resolutions are dependent upon monitor capability, and resolution and color depth settings.
5. Designed for downloads from 56K modem compliant sources. Maximum achievable download transmission rates currently do not reach 56 KB/s, and will vary with line conditions. Modem availability is subject to country regulatory approval.
6. Certain Windows Vista product features require advanced or additional hardware. See:  
<http://www.microsoft.com/windowsvista/getready/hardwarereqs.msp> and  
<http://www.microsoft.com/windowsvista/getready/capable.msp> for details. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit:  
<http://www.windowsvista.com/upgradeadvisor>.

### Standard Features

#### Keyboard

The 101/102-key compatible keyboard features an industry standard, full-pitch key layout with desktop keyboard features, such as the isolated inverted-T cursor control keys, editing keys, both left and right control and alt keys, and 12 function keys. International key layouts are available. Other features include an integrated numeric keypad, hotkeys for instant access to power conservation, brightness, and other features, 19-mm x 19-mm key pitch (center-to-center spacing), 2.5-mm stroke, comfort-dished keycaps, and bright key legends for improved visibility in low light conditions.

#### Expansion Card Slots

##### One Type I/II PC Card slot

Supports 32-bit CardBus and 16-bit PC Cards

#### Interfaces

##### PC Card Slot

One Type I/II

##### External Monitor

One – VGA

##### External Microphone

One

##### Headphone/Line out

One

##### Power Connector

One

##### RJ-11 (Modem)

One

##### RJ-45 (NIC)

One

##### USB 2.0

Two

##### LED Status Indicators

Five

#### Software

##### Preinstalled Software with Windows Vista

Adobe Acrobat Reader

HP Backup and Recovery Manager

HP Help and Support Center

Roxio Creator Basic 9

Synaptics Touchpad Driver

Symantec Norton Internet Security 2007 with complimentary 60-day live update

Intervideo WinDVD – DVD Player

#### HP Backup and Recovery Manager

Each unit is shipped with HP Backup and Recovery Manager. HP Backup and Recovery Manager can provide data and system file protection for HP business PCs to enable fast recovery if the system becomes corrupted or if important information is accidentally deleted. HP Backup and Recovery Manager can perform scheduled or manual backups of the entire drive or individual files and folders. Up to 8GB of the hard drive is reserved for the system recovery software. HP Backup and Recovery Manager can also create software recovery CDs or DVDs (requires optional hardware).

#### SMBIOS Version 2.3

System Management BIOS, previously known as DMI BIOS, is used to store system management information.

### Standard Features

#### Security

#### Standard Features

Configuration Control Hardware  
Memory Change Alert  
Ownership Tag  
Setup Password  
Power-On Password  
DriveLock  
Kensington Lock Slot

For more information on HP security solutions refer to <http://www.hp.com/go/security>.

#### Power Supply

External 65-watt AC adapter, 6-foot (1.8-meter) power cord included.  
Total length including External AC adapter is 12 feet (3.66 meter).  
HP Fast Charge\*

\* Fast Charge recharges your battery up to 90% within 90 minutes when the system is off.

#### Battery

4-cell (32 WHr) high capacity Lithium-Ion

#### Power Conservation

Hibernation  
Standby  
ACPI compliance

#### Service and Support

HP Services offers limited 1-year warranty options depending on country;  
1-year limited warranty on primary battery. On-site service and warranty upgrades are also available.  
**NOTE:** Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.  
<http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp>.



### Options

Memory	1024-MB 667-MHz DDR2 SDRAM*	EM994AA
	* Models with Mobile Intel 940GME Express Chipset or processors with 533-MHz FSB use this memory at a maximum memory speed of 533-MHz.	
Other Storage	HP USB Diskette Drive	DC361B
Power	65W Smart AC Adapter	ED494AA#ABA
	Primary 8-cell Battery	RW557AA
Carrying Cases	HP Value Nylon Case	RR314AA
	HP Universal Nylon Case	RR315AA
	HP Executive Leather case	RR316AA
	HP Deluxe Nylon Backpack	RR317AA
Security	HP/Kensington Cable Lock	PC766A
Input/Output Devices	USB Keyboard & Mouse Bundle	RC465AA#ABA
	HP USB Optical Travel Mouse	RH304AA

## Technical Specifications

System Unit	Dimensions (HxWxD)	1.26 (at front) x 14.09 x 10.12 in 35.9 (at front) x 357.9 x 227.0 mm
	Weight	Starting at 6.0 lb (2.7 kg)
	<b>NOTE:</b> Height varies depending upon where on the notebook the measurement is made. Weight varies by configuration and components. Weight includes 4-cell battery, 80-GB hard drive, 512-MB memory, and optical drive. Weight varies by configuration and components.	
Stand-Alone Power Requirements	Normal Operating Voltage	18.5 V
	Average Operating Power	12.5 W
	Max Operating Power	< 65 W
Temperature	Operating	32° to 95° F (0° to 35° C) (not writing optical) 41° to 95° F (5° to 35° C) (writing optical)
	Non-operating	-4° to 140° F (-20° to 60° C)
Relative Humidity	Operating	10% to 90%, non-condensing
	Non-operating	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature
Shock	Operating	125 G, 2 ms, half-sine
	Non-operating	200 G, 2 ms, half-sine
Random Vibration	Operating	0.75 grms
	Non-operating	1.50 grms
Altitude (unpressurized)	Operating	-50 to 10,000 ft (-15.24 to 3,048 m)
	Non-operating	-50 to 40,000 ft (-15.24 to 12,192 m)
Industry Standard Certifications	UL	Yes
	FCC Compliance	Yes
	CCC	Yes
	CE Marking Compliance	Yes
	BNCI or BELLIS	Yes
	CIT	Yes
	GOST	Yes
	Saudi Arabian Compliance (ICCP)	Yes
	SABS	Yes
	UKRSERTCOMPUTER	Yes

### Technical Specifications

65W AC Adapter	Dimensions	4.17 x 1.85 x 1.1 in (10.6 x 4.7 x 2.8 cm)	
	Weight	0.62 lb (280 g)	
	Input	100 to 240 VAC	
		Input Efficiency	83% min at 115 VAC
		Input frequency range	47 to 63 Hz
	Output	Input AC current	1.7 A at 90 VAC, 0.85 A at 180 VAC
		Output power 65W	65W
		DC output	18.5V
		Hold-up time	5 msec at 115 VAC input
		Output current limit	<5A, Over voltage protection- 29V max automatic shutdown
	Connector	3 pin/grounded, mates with interchangeable cords	
	Environmental Design	Operating temperature	32° to 104° F (0° to 40° C)
		Non-operating (storage) temperature	-4° to 149° F (-20° to 65° C)
		Altitude	0 to 10,000 ft (0 to 3,048 m)
		Humidity	20% to 80%
	EMI and Safety Certifications	Storage Humidity	10% to 90%
		CE Mark - full compliance with LVD and EMC directives; Worldwide safety standards - IEC950, EN60950, UL1950, Class2, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCIB, NOM-1 NYCE; MTBF - over 200,000 hours at 25°C ambient condition.	

32 WHr Primary 4-Cell Battery	Dimensions (H x W x L)	0.8 x 1.6 x 10.6 in (2.4 x 4.0 x 26.9 cm)	
	Weight	0.50 lb (0.225 kg)	
	Cells/Type	4-cell Lithium-Ion	
	Energy	Voltage	14.4 V
		Watt-hour Capacity	32Wh
		Amp-hour Capacity	2.2Ah
	Temperature	Operating (Charging)	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 140° F (-10° to 60° C)
		Non-operating	-4° to 140° F (-20° to 60° C)
	Battery Re-Charge Time	System in OFF mode or Standby	2.5 hours
		System ON	3 to 5 hours (depending on system power consumption)
		HP Fast Charge	Charges the battery up to 90% within 1.5 hours when system is OFF

## Technical Specifications

15.4-inch WXGA BrightView	Active Area (W x H)	13.0 x 8.1 in (33.1 x 20.7 cm)	
	Diagonal Size	15.4 in (39.1 cm)	
	Surface Treatment	BrightView	
	Contrast Ratio	300:1 (typical)	
	Refresh Rate	60 Hz	
	Brightness	200 nit (typical)	
	Pixel Resolution	Pitch	0.259 mm
		Format	1280 x 800
		Configuration	RGB stripe
	Backlight	CCFL	
	PPI	98	
	Viewing Angle	±30° Horizontal, ±10° Vertical (minimum)	

## Hard Drives

160-GB 5400 rpm SATA	Drive Weight	0.22 lb (101 g)	
	Capacity	160 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-7 / SATA 1.0a	
	Transfer Rate	Synchronous (maximum)	100 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	3 ms
		Average	13 ms
		Maximum	24 ms
	Rotational Speed	5400 rpm	
	Logical Blocks	312,581,808	
	Operating Temperature	41° to 131° F (5° to 55° C)	
	Features	ATA Security	

## Technical Specifications

120-GB 5400 rpm SATA	Drive Weight	0.22 lb (101 g)	
	Capacity	120 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-7 / SATA 1.0a	
	Transfer Rate	Synchronous (maximum)	100 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	Single Track	3 ms
		Average	13 ms
		Maximum	24 ms
	Rotational Speed	5400 rpm	
	Logical Blocks	234,441,648	
	Operating Temperature	41° to 131° F (5° to 55° C)	
	Features	ATA Security	

## Removable Storage Drives – Fixed Bay

DVD+/-RW SuperMulti DL Drive	Access Times	Random	<175 ms CD
			<230 ms DVD
	Max Data Transfer Rate	24X CD-ROM	3,600 KB/s
		8X DVD	10,800 KB/s
		24X CD-R	3,600 KB/s
		10X CD-RW	1,500 KB/s
		8X DVD+R	10,800 KB/s
		4X DVD+RW	5,400 KB/s
		8X DVD-R	10,800 KB/s
		4X DVD-RW	5,400 KB/s
		2.4X DVD+R(9)	2,700 KB/s
		5X DVD-RAM	6,750 KB/s
	Transfer Mode	Multiword DMA Mode	
	Interface	EIDE	
	Supported Media (read)	CD-DA, CD+(E)G, CD-MIDI, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM	
	Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-RAM	
	Max Media Capacity (read)	8.5 GB	
	Max Media Capacity (write)	8.5 GB	
	Transport	Tray Loading	

## Technical Specifications

### Audio

Hardware	Implementation	Conexant CX20549
	Full Duplex	Yes
	Sound Blaster Pro compatible	Yes
	Microphone Jack	Mono
	Headphone/Line Out Jack	Stereo

Audio Output Quality	Frequency Response	20 Hz – 20 kHz
	Signal to Noise Ratio	>85 dB
	Total Harmonic Distortion	0.02%
	Noise Floor	-110 dB
	Play/Record Sampling Rate(s)	8 kHz– 48 kHz
	DAC	16, 18, or 20-bit
	ADC	16, 18, or 20-bit

Internal Speaker	Power Rating	1.5 Watts
	Impedance	4 Ohms

### Communications

Intel 82562GT 10/100 Network Connection	Ethernet Features	10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14)
		100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30)
		Auto-Negotiation (Automatic Speed and Duplex Selection)
		Full Duplex and Half Duplex operation at 10 and 100 Mbit/s
	Power Management	IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable)
		<b>NOTE:</b> Auto MDI/MDI-X is not supported.
		ACPI compliant -- multiple power modes
	Performance Features	TCP / IP / UDP Checksum Offload
	Manageability	Boot-from-LAN using PXE 2.1
		<b>NOTE:</b> Wake-on-LAN and Boot-from-LAN using RPL are not supported.
	NIC Device Driver Name	Intel 82562 Network Internet Connection
	Drivers Available	Windows Vista

## Technical Specifications

Conexant CX20548 56K Modem	Form Factor	Integrated on system board
	Power Management Support	APM Revision 1.2, ACPI
	Approvals/Certifications	UL, CSA, NEMKO, CCIB, Industry Canada, FCC Part 68, CTR21, FCC Part 15 Class B, Canadian ICES-003 Class B, C.I.S.P.R.22, Australian ACA, CE Mark, Other Countries
	Data Mode Capabilities	V.92 data V.8bis V.80 V44, V.42bis, MNP5 (Compression) V.42 (LAPM, MNP2-4) (Error Correction) <b>Optional symbol rates:</b> 2800, 3429 Asymmetric Symbol rates <b>Synchronous primary channel data signaling rates:</b> 3600, 31200 Automatic rate re-negotiation V.34 V.32bis V.32 V.23 V.22bis V.22 V.21 Bell 212A Bell 103J
	Fax Mode Capabilities	TIA/EIA-578-B (Class 1) T.30, T.4 (Group 3) V.17 V.29 V.27ter V.21 Channel 2
	Command Set	V.250 (Partial) TIA-602 Identification: +GMI, +GMM, +GMR Port control: +IPR, +ICF, +IFC, +ILRR Modulation: +MS, +MR, +MA Error control: +ES, +ER, +EB, +ESR, +ETBM Data compression: +DS, +DR V.251

Intel PRO/Wireless 3945ABG Network Connection	Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g
	Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows 2000 and XP (details at <a href="http://www.hp.com/go/notebooks/WLAN">http://www.hp.com/go/notebooks/WLAN</a> )
	Frequency Band	2.4 GHz

### Technical Specifications

<b>Data Rates</b>	802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
<b>Modulation</b>	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM
<b>Security<sup>1</sup></b>	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST, EAP-SIM.  Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4).
<b>Sub-channels</b>	Multinational support with frequency bands and channels compliant to local regulations.
<b>Media Access Protocol</b>	CSMA/CA (Collision Avoidance) with ACK
<b>Network Architecture Models</b>	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
<b>Roaming</b>	IEEE 802.11 compliant roaming between access points
<b>Output Power (for CCK)<sup>2</sup></b>	15 dBm
<b>Output Power (for OFDM; power varies by data rate)<sup>2</sup></b>	15 dBm
<b>Power Consumption</b>	Transmit: 1.8 Watts (max) Receive: 1.4 Watts (max) Idle mode <sup>3</sup> : 150 mW (nominal) Sleep mode: 30 mW (max)
<b>Power Management</b>	ACPI compliant power management 802.11 compliant power saving mode
<b>Receiver Sensitivity<sup>4</sup></b>	54 Mbps: -72 dBm, 11 Mbps: -88 dBm, 1 Mbps: -97 dBm
<b>Antenna Connections</b>	2 U.FL type connectors, 50 ohm nominal impedance
<b>Range</b>	802.11 a - Typical      600 feet - Outdoor Open Area (@6 Mbps)                150 feet - Indoor, Office environment 802.11 b - Typical      1200 feet - Outdoor Open Area (@1 Mbps)                300 feet - Indoor, Office environment 802.11 g - Typical      1200 feet - Outdoor Open Area (@1 Mbps)                300 feet - Indoor, Office environment
<b>Form Factor</b>	PCI-Express MiniCard
<b>Weight</b>	0.013 lb (6 g)
<b>Dimensions</b>	0.19 x 1.2 x 2.0 in (4.75 x 29.85 x 50.8 mm)
<b>Operating Voltage</b>	3.3V +/- 9%, 1.5V +/- 5%
<b>Temperature</b>	Operating                32° to 176° F (0° to 80° C) Non-operating        -40° to 176° F (-40° to 80° C)
<b>Humidity</b>	Operating                10% to 90% (non-condensing) Non-operating        5% to 95% (non-condensing)
<b>Altitude</b>	Operating                0 to 10,000 ft (3,048 m) Non-operating        0 to 50,000 ft (15,240 m)



## Technical Specifications

Configuration Utility <sup>5</sup>	Microsoft Windows 2000 or XP Choice of Configuration Utility:
	<ul style="list-style-type: none"> <li>• Microsoft Windows XP Wireless Network Connection Manager</li> <li>• Intel PROSet for Microsoft Windows 2000 or XP (required for Cisco Compatible Extensions support)</li> </ul>
	Microsoft Windows Vista
	<ul style="list-style-type: none"> <li>• Microsoft Windows Vista Wireless Network Connection Manager</li> </ul>
LED Activity	LED Off – Radio OFF; Solid LED On – Radio ON
	<ol style="list-style-type: none"> <li>1. Check latest software/driver release for updates on supported security features.</li> <li>2. Maximum output power may vary by country according to local regulations.</li> <li>3. In Power Save Polling mode.</li> <li>4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).</li> <li>5. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows 2000 or XP. WLAN may also be compatible with certain third-party software supplicants.</li> </ol>

Broadcom WMIB184G 802.11b/g WiFi Adapter	Wireless LAN Standards	IEEE 802.11b IEEE 802.11g
	Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows 2000 and XP (details at <a href="http://www.hp.com/go/notebooks/WLAN">http://www.hp.com/go/notebooks/WLAN</a> )
	Frequency Band	2.4 GHz
	Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM
	Security <sup>1</sup>	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST, EAP-SIM.
		Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4).
	Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.
	Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
	Network Architecture	Ad-hoc (Peer to Peer)
	Models	Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between access points
	Output Power (for CCK) <sup>2</sup>	17.5 dBm
	Output Power (for OFDM; 15 dBm power varies by data rate) <sup>2</sup>	

### Technical Specifications

Power Consumption	Transmit: 2.0 W (max) Receive: 1.5 W (max) Idle mode <sup>3</sup> : 390 mW (nominal) Sleep mode: 20 mW (max)	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity <sup>4</sup>	54 Mbps: -72 dBm, 11 Mbps: -88 dBm , 1 Mbps: -97 dBm	
Antenna type	High efficiency dual band antenna with spatial diversity, mounted in the display enclosure	
Range	802.11 b – Typical (@1 Mbps)	1200 feet – Outdoor Open Area 300 feet – Indoor, Office environment
	802.11 g – Typical (@1 Mbps)	1200 feet – Outdoor Open Area 300 feet – Indoor, Office environment
Form Factor	PCI-Express MiniCard	
Weight	0.026 lb (12 g)	
Dimensions	0.19 x 1.2 x 2.0 in (4.75 x 29.85 x 50.8 mm)	
Operating Voltage	3.3v +/- 10%	
Temperature	Operating	32° to 176° F (0° to 80° C)
	Non-operating	-40° to 176° F (-40° to 80° C)
Humidity	Operating	10% to 90% (non-condensing)
	Non-operating	5% to 95% (non-condensing)
Altitude	Operating	0 to 10,000 ft (3,048 m)
	Non-operating	0 to 50,000 ft (15,240 m)
Configuration Utility <sup>5</sup>	Microsoft Windows 2000 or XP Choice of Configuration Utility: <ul style="list-style-type: none"><li>• Microsoft Windows XP Wireless Network Connection Manager</li><li>• Broadcom Wireless Configuration Utility (required for Cisco Compatible Extensions support)</li></ul> Microsoft Windows Vista <ul style="list-style-type: none"><li>• Microsoft Windows Vista Wireless Network Connection Manager</li></ul>	
LED Activity	LED Off – Radio OFF; Solid LED On – Radio ON <ol style="list-style-type: none"><li>1. Check latest software/driver release for updates on supported security features.</li><li>2. Maximum output power may vary by country according to local regulations.</li><li>3. In Power Save Polling mode.</li><li>4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).</li><li>5. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows 2000 or XP. WLAN may also be compatible with certain third-party software supplicants.</li></ol>	

## *Technical Specifications*

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